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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,616	06/27/2001	Fredrick L. Linton	6.30.3218 (LBT069US)	8843

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11/18/2003

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EXAMINER

SCHLAK, DANIEL K

ART UNIT

PAPER NUMBER

3653

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,616

Applicant(s)

LINTON, FREDRICK L.

Examiner

Daniel K Schlak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 5, and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "said selected beverage container" in line 2, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "said stream of selected articles" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "said article" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 3-6, 8-10, 12, 14, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,041,910 to Avery et al.

Avery teaches a device and method for diverting an article selected for removal from a stream of articles traveling along a pathway on a conveyor wherein a servo motor is used to acceleratingly rotate an article deflector member located adjacent the pathway into the pathway to contact and controllably sweep an article from the stream, and rotatable out of the pathway to allow subsequent articles to continue traveling along the pathway.

The servo motor of Avery is run by a synchronous control system, and is thus a synchronous motor. Any motor run by a synchronous control system can broadly be interpreted as a synchronous motor.

In Avery, at least some of the articles will be struck at adjacent to and just below their centers of gravity. The degree and/or speed of rotation is/are variable. Certainly the deflector doesn't reach its deflecting velocity instantaneously.

The signal to which the deflector responds originates from a sensing device which has identified a specific condition. A bracket secures the deflecting device to the conveyor.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, and 8-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2,945,588 to Fenn, in light of US 4,836,387 to Cottrell.

Fenn teaches a device and method for diverting bottles by controllably sweeping them from a conveyor by locating a deflector member, rotating it into a pathway, contacting the bottles, removing bottles from a stream of bottles, and reversing rotation of said deflector member to remove it from the pathway to allow subsequent non-selected bottles to continue along the pathway.

Bottles are contacted at, or in a zone, immediately adjacent to and below, their centers of gravity. The degree of movement and speed of movement of the deflector are/is variable. The signal to which the deflector responds originates from a sensing device which identifies a specific condition selecting the bottles for rejection.

Fenn utilizes a solenoid motor to drive the deflector. Fenn does not teach a synchronous motor.

Cottrell teaches the use of a stepper motor to operate a "deflector movable between first and second positions and located in a path of movement of the articles to be sorted" (c1, lines 14-16). In the background of the invention, the first paragraph of Cottrell, it is recited that normally deflecting devices are rotated by solenoids. Column 3, lines 25-33 of Cottrell, recite "the arrangement shown" (stepper motor driving a deflector) "has the advantage that a single stepping motor can be used to cause a deflector to divert articles into either of the output paths; in apparatus using solenoid-operated deflectors, we previously used two solenoids, one to pull the deflector in each

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direction. The stepping motor has good reliability and long life and the driving circuits required are inexpensive and simple. Control is effected by a single binary signal and the response is fast (typically 15ms)."

Column 3, lines 18-21 of Cottrell recite "the stepping motor system described thus gives bi-directional operation without requiring a spring return."

From the above, it is clear that the intent of Cottrell is to replace solenoids with stepper motors.

It is common knowledge, and the Examiner takes Official Notice, that stepper motors are special types of synchronous motors, and in any event are synchronous in nature.

It would be obvious to one of ordinary skill in the art at the time of invention of Cottrell's device to retrofit the bottle sorter of Fenn with Cottrell's concept, replacing the solenoid and spring with the stepper motor of Cottrell, because Cottrell explicitly recites this use environment and specifically singles out solenoid deflector-drives as the obsolete element in sorting systems. Fenn teaches a deflector being driven by a solenoid capable of deflecting articles to a second path, and this is exactly what Cottrell set out to obviate. The advantages are spelled out in Cottrell, and motivation is achieved without any further explanation here by Cottrell's specific obviation of the solenoid in sorting applications where speed is of issue. Anyone looking at Figure 2 of Fenn could easily observe that Fenn would operate optimally by utilizing a faster activator for the deflector. Also given are the advantages of Cottrell's device in longevity and simplicity of operation.

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Claims 1, 3-6, and 8-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,549,272 to Hagan et al. in light of Cottrell.

Hagan teaches a device and method for diverting articles by controllably sweeping them from a conveyor by locating a deflector member, rotating it into a pathway, contacting the articles, removing articles from a stream of articles, and reversing rotation of said deflector member to remove it from the pathway to allow subsequent non-selected articles to continue along the pathway.

Articles are contacted at, or in a zone, immediately adjacent to and below, their centers of gravity. The degree of movement and speed of movement of the deflector are/is variable. The signal to which the deflector responds originates from a sensing device which identifies a specific condition selecting the articles for rejection.

Hagan utilizes a solenoid motor to drive the deflector. Hagan does not teach a synchronous motor.

Cottrell teaches the use of a stepper motor to operate a "deflector movable between first and second positions and located in a path of movement of the articles to be sorted" (c1, lines 14-16). In the background of the invention, the first paragraph of Cottrell, it is recited that normally deflecting devices rotated by solenoids. Column 3, lines 25-33 of Cottrell, recite "the arrangement shown" (stepper motor driving a deflector) "has the advantage that a single stepping motor can be used to cause a deflector to divert articles into either of the output paths; in apparatus using solenoid-operated deflectors, we previously used two solenoids, one to pull the deflector in each

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Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avery.

Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagan in view of Cottrell.

Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fenn in view of Cottrell.

None of the references teaching the deflector in operation recites adjusting means for the bracket which maintains the deflector system adjacent the conveyor.

It would have been obvious to one having ordinary skill in the art at the time of the invention (of any of the references) was made to make the bracket adjustable, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ 284 (ccpa 1954). For any of these references, the desire to strike the articles at the proper height is innate, and easily understood by anyone of ordinary skill in the sorting arts.

Response to Arguments

The text of the arguments (in paper #8 filed 9/02/03 comprising amendments and arguments) on page 8 and on the first paragraph of page 9 deal with the inventive concept in general, and do not deal with the claims. Thus, they have not been addressed.

The second paragraph of page 9 of the amendment discusses the reason for developing Avery's device, and the pusher arm's movements.

The first full paragraph of page 10 recites what is and is not critical for Avery, but does not deal with the claims. The end of the paragraph discusses Avery's inability to thrust "in a sweep", but this too has no pertinence to the claims.

These arguments seem to have nothing to do with the claims. However, the Examiner assumes that they are attempts to assert that Avery does not "acceleratingly rotate" the deflector member into the pathway. The Examiner wishes to introduce at this point a few features that would be assumed to convey understanding to anyone with a technical background. Firstly, if Avery begins at rest and is then moved, whether or not the acceleration is accomplished before contacting any articles, the rotation is effected in an "accelerating" manner. If it were not done acceleratingly, it would never achieve a speed higher than zero. Secondly, as Avery's deflector is of the rotating type, the laws of physics dictate that every point on the deflector not exactly at the center thereof *is always in a state of acceleration*, known as centripetal acceleration, at all times while the deflector is being rotated. Thus, the addition of "acceleratingly" to the apparatus claims conveys no patentability over Avery.

Further, to bring light to a further law known to some, namely Newton's second law, it is impossible for Avery's deflector to contact an ejected item *without* acceleration in direction opposite to movement. In fact, it can be said that Avery's deflector experiences more accelerations throughout its journey than does that of the instant application.

Not a single word of page 11 of the amendment is addressed to the claims. Applicant relies wholly on comparisons of the art with the specification, while it is in fact

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the claims which are under rejection. Thus, paragraphs two and three of page 11 have been wholly foregone.

The arguments continue in like manner on page 12, wherein it is stated that Avery cannot perform "removal of the pusher by reversing the rotation" and the direction of "rejected articles to different locations using the same device..." The examiner notes that these particulars are not claimed in the claims rejected under Avery, thus the statement that their failure to be taught leaves Avery incapable of anticipation of Claim 1 is without any basis whatsoever. The reverse rotation recitation is brought forth in claims 11, 16, and 23 which, if Applicant will kindly note, have not been rejected under Avery.

In fact, the Examiner has not been able to locate a single argument pertaining to the rejections under 35 U.S.C. 102 that actually deal with the claimed subject matter. In other words, nowhere do they recite "Avery does not teach" followed by an actual claim limitation. Thus there is nothing worthy of rebuttal.

In the discussion on page 13 of the amendment, applicant asserts that Cottrell does not teach the "sweeping action". The examiner notes that Cottrell is simply a motor rotating a shaft. What it does to the articles it contacts, although applicable to the rejection under 35 U.S.C. 103, in any event the rotation of a deflector of one stop to another, can be considered a sweeping action. Further, if a conveyed article is moved longitudinally on a conveyor while being pushed laterally to one side, in a broad interpretation it can be said that the article is being "swept".

The arguments against the combination of Cottrell with Fenn, are flawed in the statement, in the third paragraph of page 13 of the response, that Fenn's pusher does not "rotate". Anyone looking at figure 2 of Fenn would realize that this is a misrepresentation of the reference, and should not be considered an applicable basis from which to attack the combination. Further, the arguments on page 13 that Fenn offers a simple lateral "push" of the bottles is another misrepresentation of the reference, as the movement of the "push" will follow an arc and thus will not be wholly lateral. And what the bottles do after moving off the conveyor of Fenn is not in the least bit pertinent to the claims.

It is even less pertinent to the claims whether or not Fenn is a "bopper", or whatever else Applicant chooses to call it. Fenn teaches everything of the claims rejected under this paragraph except for a synchronous motor, and the rejection asserts that in light of Cottrell, which directs that solenoids can and would, for many reasons, be replaced by a type of synchronous motor, the solenoid of Fenn would be replaced with a such type of synchronous motor.

The combination of references, simply put, was based on the fact that Fenn's deflector does indeed rotate back and forth between two fixed positions. It does so quickly, regardless of whether or not it is desired to reach the speeds discussed by applicant, and whether it "sweeps" in the exact same manner as the instant invention is not pertinent to the claims, so long as it does sweep. It certainly does reach fast speeds and it certainly does "sweep" articles. The combination of references entails a simple replacement of the means by which Fenn's deflector is rotated back and forth between

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stops, and to use the motor of Cottrell to do so. Cottrell does not discuss the deflector in detail, simply putting forth means for rotating rotatable bodies back and forth, and stating that it particularly applies to deflectors.

Applicant states, in the first full paragraph of page 14, that combining Cottrell with Fenn... "would, simply, result in the pusher device of Fenn operating at higher speeds. It would, in fact, provide a prior art "bopper" device as discussed in the present specification. The examiner cannot see what this has to do with any alleged flaws in the combination of references.

Further arguments assert that Hagan does not "sweep" articles. The Examiner believes that articles moving longitudinally on a belt which contact an object that causes them to be pushed laterally are indeed swept. The arguments based on the definition of the word "sweep" are semantical at best, and in any interpretation cannot go to prove that the articles are not swept. If one were to follow the articles along the conveyor, maintaining the point on the conveyor where the article resides as a point of reference, the deflector of Hagan is certainly moving and therefore, as far as the article knows, the article is swept. The claims never say that rotation cannot be performed before the article-to-be-swept arrives.

In summary, the examiner notes that a review of the arguments reveals no assertions that Avery is deficient of any one feature claimed positively in the claims which Avery anticipates. The arguments never give one substantial argument against the combination of Fenn with Cottrell, never saying that they lack motivation to combine, would be inoperable as combined, etc. The examiner has rejected claims, not

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the specification. One could discuss the nature of the instant application and the nature of the references for a hundred more pages, and it would not matter as long as the claim rejections themselves were not addressed, and/or if the claims themselves were never discussed. The arguments against the combination of Fenn and Cottrell are based upon the idea, conceived by the applicant and not based on the rejection, of using the control method of Cottrell, and also on the falsely purported non-rotation of Fenn's deflector. As Fenn has shown that its deflector does rotate, and as the rejection was not based upon the control method of Cottrell but instead on the simple suggestion that Cottrell makes that his motor is intended to replace multi-directional solenoid systems in deflectors that rotate on a shaft, the Examiner maintains the assertion that Cottrell provides adequate motivation to retrofit Fenn's device to replace the solenoid system with a synchronous motor, which would produce a device which certainly "sweeps" articles as they pass on the conveyor of Fenn, offering the advantages of a stepping (synchronous) motor while avoiding the well-known drawbacks of a solenoid system. This has not been addressed in the arguments, and thus the rejection stands.

The argument against Hagan is that Hagan does not sweep. Following the rationale already put forth by the examiner, Hagan certainly "sweeps" the articles. Further, applicant states that there is no need to make Hagan faster. In conveying devices having deflectors, there is *always* a need to make things faster and smoother. A patent for a propeller drive published in 1920 would also show satisfaction with the aircraft speeds it achieved, but surely one of ordinary skill in the art in the 1950's would not cling to the statement of such, being also aware of the thousands of patents issued

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in turbo-fan and gas turbine technology. Likewise, Cottrell has only put forth the obviation of solenoid drives with a stepper motor. He has not proposed to re-wire and re-program the sorting systems of Hagan and Fenn or of any other conveyor/deflector system.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

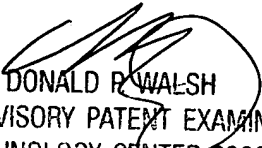
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel K Schlak whose telephone number is 703-305-0885. The examiner can normally be reached on Mon-Thurs.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on 703-306 - 4173. The fax phone number for the organization where this application or proceeding is assigned is 703-306-4195.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308 - 1113.

dks


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